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sent me, as well as those from Pennsylvania, are subglobose, from which I infer that in these localities this is the prevailing form.

EXPLANATION OF THE PLATE.—*Physalacria inflata*.—Fig. 1, a cluster of plants. Fig. 2, a single plant enlarged. Fig. 3, three cystidia x 400. Fig. 4, five basidia, one of them bearing two spores x 400. Fig. 5, six spores x 400.

Secotium Warnei.—Fig. 6, an obovate plant. Fig. 7, a small ovate plant with a distinct stem. Fig. 8, a small subglobose umbonate plant. Fig. 9, vertical section of an oblong plant, showing the hymenial plates and percurrent stem. Fig. 10, a basidium bearing four spores x 400. Fig. 11, seven spores x 400.

Additions to the Flora of the United States.—*Crataegus arborescens*, Ell., is not uncommon in the rich alluvions of the Mississippi River, near St. Louis, and probably inhabits the banks of this river and its lower tributaries down to its mouth. It has not been recognized of late and seems to be quite rare in herbaria, and is probably not in cultivation. I have not much to add to Elliott's, Torrey and Gray's and Chapman's descriptions, but may say that in this neighborhood it is the largest species of the genus, making trunks from 8-12 and, as Mr. Eggert informs me, even 18 inches in diameter, 5-7 feet high, fluted or grooved, and with a broad top, rarely bearing any thorns. The leaves, cuneiform at base, undivided or, at the end of shoots, 3-lobed, resemble in form those of *C. tomentosa*, but are smaller, much thinner and smoother, even when young, often with soft down in the axils of veins underneath; flowers in loose corymbs, only 7 or 8 lines wide; calyx smooth, neither pubescent nor glandular, with triangular acute lobes; styles 5; drupes depressed-globular, 4-5 lines thick with 5 (or rarely more) stones grooved on the back, bright red or rarely orange-colored, persisting through winter, when those of our other species, *C. coccinea*, *Crus-galli*, *subvillosa* and *tomentosa* drop off.

Sagittaria natans, Michx., has been noticed by Mr. C. E. Faxon, since a number of years in Charles River, Mass., "at the depth of 2 to 4 feet, and entirely above the influence of tide-water," and also, as he informs me, in Neponset and in Ipswich Rivers, where Mr. J. Robinson found it. It flowers there from the middle of June to the end of July, but never perfects fruit, and thus is evidently not at home in those northern waters, where it has a precarious existence by stolons; these can only winter where deep water protects them from frost. The seed was probably first brought there from the South, by water-fowl who disseminate so many water-plants. Scape and phyllodia 2-4 feet long, barely reaching the surface of the water, leaf-blades rarely developed, and then linear-lanceolate; raceme as well as pedicels often elongated in order to reach air and light; flowers 6-7 lines wide, opening in forenoon, submerged again toward evening, only one or two of the lowest whorl fertile, the others all male; male flowers with 6 exterior and 1 or 2 central stamens; filaments about as long as the nearly orbicular anthers, bulbous at base and smooth; pistils of the female flowers numerous, minute, erect, style as long as the ovary; fruit (never matured in the North) in southern specimens marked by several (5 or 7) denticulate crests on back and sides. *Sagittaria pusilla*, Pursh., must be considered as a subterrestrial form of this species, distinguished only by its size and by a 3-crested achen. *S. graminea*, with which I had confounded the northern

form, is distinguished by the great number of stamens and the papillose filaments, even where the fruit can not be compared.

G. ENGELMANN.

Notes from Utah and Nevada.—It was my good fortune on returning from California to spend a day or two in the East Humboldt Mountains, Nevada, where Mr. Watson botanized years ago. Some very interesting plants were found; among them, *Aspidium aculeatum*, var. *scopulinum*. This grew in the crevices of rocks at 9000 feet altitude. On reaching Salt Lake City, I had occasion to botanize at Wasatch, 20 miles southeast, at the mouth of Little Cottonwood Canyon, (altitude about 5000 feet); there I found the same fern growing in the crevices of wet rocks. It has the habit of *Aspidium Lonchitis*, and closely resembles it. I see no resemblance to *A. aculeatum* and cannot see how it came to be referred to that species. I understand that Prof. Eaton contemplates transferring it to *A. mohrioides*. I was able to secure quite a number of fronds and two living plants, by which it will be possible to study it still more closely. I am indebted to Mr. Davenport for the determination.

Prof. Eaton, in Bot. Wheeler's Rep., says that the sterile fronds of *Pellaea densa* are rare. This is not the case in Utah. They are on almost every root of plants that grow at high altitudes.

The spore-cases of *Notholaena dealbata* are quite interesting. They are oval, light chocolate-brown, splitting entirely in two, one half remaining behind like the lower half of the pod of *Portulaca*, making the frond appear as if covered with minute shells.

In my specimens of *Sidalcea malvaeflora* the pods are reticulated, not smooth as stated in Botany of California.

Dalea polyadenia is thorny and makes unpleasant swellings, when the thorns pierce the flesh, as though it were poisonous.

Astragalus multiflorus dries black, and is almost the only species that I know which does dry thus.

The appressed hairs of *Townsendia scapigera* are almost always two-jointed and bent at the joints and so appressed.

I have specimens of *Chaenactis Douglasii* from Nevada, with the five outer pappus-scales black at base and almost as long as the akene, the five inner scales narrow, half as long; akene hirsute.

In *Chaenactis carphoclinia* the chaff subtends only one or two rows of outer akenes in my specimens.

Allium validum has a narrowly-winged stem, and bulb-coat reticulated, much like *A. anceps*; the style is not always "longer than the stamens." In other respects my specimens agree with Watson's, which were gathered in the same mountains.

I have *Carex luzulaefolia* from the East Humboldt Mountains, Nevada, as well as from the Wasatch.

I noticed in a former article that the shape of the sterile filament is now given up as a test in *Scrophularia Californica*. The Utah plants which I have seen have the leaves of *nodosa* and the inflorescence of *Californica*, which adds another to the strong points against the specific value of *S. Californica*. I found a number of plants this season which were devoid of any vestige of a sterile filament.